TEXTILE BULLETIN

Vol. 54 March 3, 1938 No. 1

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TEXTILE BULLETIN

ABP

Vol. 54 March 3, 1938 No. 1

Cotton Textile Merchants Protest Trade Agreement[*]

THE members of this Association are marketing agencies engaged in the primary distribution of a large volume of cotton cloth and fabrics, and articles manufactured from such fabrics. Since our functions lie primarily in the field of distribution, we can only regard with alarm a proposal the effect of which would be the further sharing of our domestic market with the other textile producing countries of the world which are able to operate at prices and costs based upon a considerably lower standard of living.

In the stress of world competition, the markets available to domestic industry have already been reduced by approximately 300 million square yards of exports, this figure being the difference between the present annual volume and that enjoyed between the years 1926 and 1929. This business is lost with little chance of eventual recovery because domestic producers cannot meet the textile exporting nations, especially Japan, in price competition.

Our export volume has, in consequence, been curtailed to the pitiful annual figure of 200 to 250 million square yards in comparison with 2.6 to 2.7 billion square yards for Japan and about 2 billion square yards for the United Kingdom. If it were not for our favorable relations with Cuba and the Philippines this proportion of the world's textile markets would be even smaller. The tabulation of cotton cloth exports from each of the three major textile countries for the past seven years is a graphic picture of the present world market for cotton goods and provides food for speculation about the future course of world trade in such products.

It will be seen from these figures that the United Kingdom has fairly successfully maintained its volume of exports since 1933 while Japan has increased its exports approximately 30 per cent since that time. Compared with 1931 Japan has gained over 1,200 million square yards in exports and we have lost more than one-third of the small share of the export business that we had in that year. The figures below are from the New York Cotton Exchange Service.

Exports

(In million of square yards)

	Japan	United Kingdom	U. S. A.
1937	2,633	1,923	236
1936	2,706	1,917	201
1935	2,716	1,949	187
1934	2,569	1,995	226
1933	2,069	2,032	302
1932	2,033	1,716	375
1931	1,412	2,407	367

The decrease in exports from the United States, which are in sharp contrast with the growth of Japanese exports, has compelled our domestic industry to concentrate its attention upon raising the standards of living, with respect to consumption of cotton goods, within the domestic boundaries of the United States, where existing tariff rates have, at least partially, served the purpose of equalizing higher wage scales, shorter work-week and other high standards of labor which the workers of this country demand.

Under prevailing tariff rates, we have already been compelled to share a considerable part of the domestic market for cotton goods with low-priced products from Japan to whose industry the extension of any tariff reductions made in a trade agreement with the United Kingdom could only serve as an added incentive to still further increasing Japan's share of our domestic markets. This is especially true of the countable cotton cloth imports that are entered under paragraph 904 of the United States Tariff Act of 1930.

The largest yardage volume affected by any such reduction relates to cotton cloth, bleached, imported under paragraph 904 (b). We show below the amazing growth of imports of these products over the past seven years, as well as the growth of such imports from both the United Kingdom and Japan. It will be noted that the surprising increase in the total corresponds almost exactly with the increase in such imports from Japan, although imports from the United Kingdom have also been considerably increased.

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[*] Submitted to the Committee for Reciprocity Information by W. Ray Bell, President of The Association of Cotton Textile Merchants of New York.

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Cotton Cloth, Bleached—Imports—In Square Yards

	Total	United Kingdom	Japan
1931	7,655,867	1,843,144	86,215
1932	9,645,288	2,410,191	45,084
1933	19,287,997	2,903,263	247,141
1934	19,965,536	2,176,924	6,040,649
1935	37,346,095	2,008,824	30,020,515
1936	73,745,028	2,360,937	65,606,732
1937	95,747,827	2,600,004	88,178,606

(Figures quoted are from Bureau of Foreign and Domestic Commerce—figures for 1935, 1936 and 1937 are preliminary figures.)

Any downward revision of present rates of duty on imports under this paragraph would effectually reduce the markets available to domestic industry in favor of the Japanese products, with but small advantage to the textile industry of the United Kingdom.

Similar developments have occurred in respect to imports under paragraph 904 (c) of the Tariff Act of 1930, which paragraph covers cotton cloth printed, dyed or colored. Under the present rates of duty, Japanese products enter this country in ever-increasing volume, with prices so low as to make competition by domestic products or the products of the United Kingdom impossible. The following figures for the past seven years reflect the growing dominance of Japan in this field, as well as a considerable increase in imports from the United Kingdom.

Cotton Cloth Printed, Dyed or Colored—Imports—In Square Yards

	Total	United Kingdom	Japan
1931	12,634,009	2,665,950	646,165
1932	9,427,445	1,707,628	702,796
1933	9,783,003	2,037,354	828,621
1934	9,685,977	1,906,342	1,131,189
1935	12,282,675	2,431,650	4,861,533
1936	20,947,611	3,519,568	9,622,139
1937	28,079,657	3,673,855	15,498,567

(Figures quoted are from Bureau of Foreign and Domestic Commerce—figures for 1935, 1936 and 1937 are preliminary figures.)

In connection with the above indicated increases in Japan imports of both cotton cloth bleached and cotton cloth printed, dyed or colored, it is well to remember that in 1936 the textile industry of the United States was placed in the embarrassing position of having to request Japanese manufacturers to limit their exports of such products to the United States by applying definite quotas thereto.

The chief product of our domestic industry is cotton cloth, not bleached, printed, dyed or colored, which is covered by paragraph 904 (c) of the Tariff Act of 1930. Under this classification is included the raw material for a large variety of industries which serve as the chief consumers of domestic yardage. Because paragraph 904 (a) of the Tariff Act of 1930 imposes a specific rate of duty of "not less than fifty-five one-hundreds of one per cent per average number per pound," the figures on imports of such product do not show the amazing increase in the past seven years that figures on imports of bleached, printed, dyed or colored cotton cloths reflect. It is obvious, therefore, that any reduction in the rate of duty, and particularly the specific duty imposed by paragraph 904 (a) on these products would have a most adverse effect on the entire domestic industry and would further promote the advantages of our Japanese competitors.

In addition to the above classification in which we believe any reduction of tariff duty would prove injurious to domestic industry and against the public interest, we urge that no revision or reduction of tariff duties be considered with respect to such related classification as cotton sheets and pillow cases imported under paragraph 911 (b) of the Tariff Act of 1930 where the current rate of duty is only twenty-five per cent. As in the above classifications, the producing facilities of this country require a wider field of distribution for these products than we have yet been able to find. Here again, the significant increases in recent years have been in imports from Japan and we cannot regard a further sharing of our domestic market with Japanese industry to be a sound public policy.

Our comments with respect to the proposed negotiation of a trade agreement with the Government of the United Kingdom have touched briefly upon the developments of recent years in the three great textile countries of the world. Because of widely different social and economic developments in the United States, our domestic industry has been forced to withdraw from price competition in the world market and to concentrate its activities in building up domestic consumption to a higher standard of living. This result, in so far as it has been attained, has been accomplished through intensive competition and increasingly greater values in relation to other products. There is a complete absence of monopoly or other artificial methods of maintaining prices in the domestic textile industry and the benefits of tariff duties are, therefore, not injurious to consumers in this country.

We hold the conviction that broadly competitive products, such as cotton textiles, in which three great nations are constantly seeking extension of their markets to provide work for the less skilled industrial population, are not proper subjects for reciprocal trade agreements. The loss of customary markets will result in proportionately greater injury to the importing nation than in benefit to the country of export. This would seem to be particularly true where a wide gulf exists between the living standards of the competing nations.

Conclusions

1. The productive capacity of domestic industry in cotton textiles, and particularly the products and classifications discussed above is more than sufficient to take care of the consumption requirements of the United States.

2. Intensive competition between domestic producers insures the consumer in this country of the lowest possible prices based on the American standard of living.

3. The chief effect of a reduction in tariff duties on the imports of cotton textiles, and particularly the classifications above discussed, would be to turn over a larger share of the world's textile business, particularly the con-

(Continued on Page 26)

Textile Plant Boiler Rooms

By Lester D. Cushman*

HOW often the writer has encountered the expressed thought or desire of the office personnel in industrial plants, management so-called, to know more about their steam production equipment and steam utilization processes, not highly technical knowledge but the common everyday whys and wherefores of steam production and use. To these men this wholly non-technical article is offered with an effort to arouse in them thoughts and considerations other than the one so frequently expressed: "The Boiler Room, that's a necessary nuisance."

Not infrequently this same boiler room receives scant attention from management. The production of steam whether it be for process or heating purposes is taken for granted, and only marked, outstanding changes in the monthly or yearly coal cost attract sufficient attention in the "front office" to cause any more than a mild flurry.

Management, involved as it is with raw stock costs, production schedules, inventory, labor costs, new production equipment or the maintenance of existing machinery seems to find little opportunity to study and analyze their "power dollar."

No matter whether the plant in question is engaged in full-fashioned hosiery, dyeing and finishing, cotton or woolen textile manufacture, that same "power dollar" is worthy of careful study, analysis and even prayerful consideration. For often enough its neglect spells the difference between operating on the black or the red side of the ledger. This is particularly true today with mounting material and labor costs and with both foreign and domestic markets in an unstable condition.

Not long before the died, Fred Lowe, for years the editor of *Power*, made this surprising statement, and who knew better than he? "Taking all the steam power producing plants in the United States and lumping the lot, it's safe to say that *fifty cents* of their power dollar is wasted." At that he didn't include railroad motive power; but did include all the highly efficient public utility steam plants.

Naturally, he included in this not only power production but power utilization as well. No attempt will be made herein to cover the limitless field of the latter situation, except in so far as its economical utilization effects boiler plant capacity.

Many concerns operate today on a budget basis but how many textile, dyeing or hosiery plants budget their steam costs? We don't mean allocate a lump sum each year for fuel, fire room labor, and steam plant maintenance; but a breakdown of steam and other power costs into departments or operations and then considering their *unit* costs, segregated and balanced against unit yardage, unit poundage, or unit counts of finished goods produced.

This is no difficult accounting problem and the picture that weekly or monthly reports, upon analysis, points the way toward vanishing profits, and many times offers the key to that problem's solution.

No claim is made that such a system is infallible but it is certainly to be preferred to no system at all.

What then are power costs? How may intelligent figures be arrived at? In the case of a mill that has been operating for a number of years, go back over the books for the last few years and establish first, the total power production cost for each three-month period. Then work out a production unit, whether it be yardage, poundage, or dozens of pairs produced, over the same period and find out what that unit costs amounted to. Then by judicious use of common sense and both accounting and engineering are 80% common sense and 20% "know how," split up the figures previously arrived at into production operation, or departmental sub-divisions. Having arrived at these figures, use them as a general yardstick, and still employing common sense budget each department or operation with a power cost of so many cents or fractions of a cent per unit of production. General building heating will have to be carried as a separate item, of course, and no one can be held accountable for that except the weather man and he isn't accountable for anything.

The figures arrived at by this process may be mis-

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*Sales Engineer, Allan T. Shepherd Company, Charlotte, N. C.

leading, for the plant may have been operated, over the period analyzed, in a very wasteful manner. If you suspect that this is so, then pare or shave each item a little and try it out. One thing is dead sure and that is, if you tell a man that you're giving him seven dollars to live on for a week, and that *he's got to make it last,* he won't come around the morning before his next allotment and cry for more money; at any rate he won't try it, more than once, for he knows that if he does you'll find someone who can and will live on seven dollars and he will be out, so if he's smart he will have fifty cents left over when his week is up.

Now use the same general scheme on a unit power cost budget at the start, if the departmental power costs are held within limits month by month, cut them a little, if they consistently run over, boost the ante *or better still* find out why they run over.

Now all this cost accounting is based on being able to segregate and accurately measure departmental power costs, in most cases, a relatively simple and not too expensive procedure, involving recording meters for the major departments and some care in evaluating costs, an expense that over a year or two's operation will pay handsome dividends.

Now just because you operate a small plant with perhaps only one small boiler, don't say to yourself, "Oh, that's all right for the big plants, but it's not worth the bother in my little plant"; but don't fool yourself, for unit costs in the small plant really play as important part in its successful operation as they do in the largest plants in the South. Don't be afraid of a top heavy situation "too much system," just use common sense and you will find that if you don't attempt too complicated a cost system you will be thankful ever afterward.

So far we've been out in the mill and not in the boiler room at all, so let's consider our steam making equipment.

First as to type. Boilers may be divided into two general types, (a) fire tube, (b) water tube, there being, of course, numerous sub-classifications of the two general types, such as horizontal return tubular, vertical and fire-box for the fire tube units, and bent tube and straight tube header types for the water tube.

Let us consider the type or kind of boiler we should have and then let's consider how we hould operate the ones that we do or may have. Choice of either type A or type B is pretty largely a question of normal loads, peak loads and whether the load is fairly steady or carries wide fluctuations. The outstanding characteristics of the two general types may be roughly classified as follows for a given steam load:

	Service	Choose
1.	First installation cost	A
2.	Probable life	AB
3.	Ability to carry steady load	B
4.	Ability to carry fluctuating load	A
5.	Overall efficiency	B
6.	Maintenance	AB
7.	For moderate and large loads	B
8.	For small loads	A
9.	Ability to carry overloads	B
10.	Operating pressure up to 150 lbs.	A
11.	Operating press above 150 lbs.	B

The size of the load is relatively elastic term for what might be a large load in one man's plant would be a small one in another, and since boiler manufacturers today offer both types with capacities A from 1500 to 10,000 lbs. of steam per hour; B from 6000 to 1,000,000 lbs. per hour; the choice largely becomes a matter of adaptability to the existing load conditions.

So let's make a rough analysis of our loads and proceed. The following data may be used *only for a rough guide* as to steam demand and is based on the usual steam pressures employed.

Dye House. 1500 lbs. steam per M. lbs. goods processed to bring to boil. 375 lbs. steam per M. lbs goods processed to hold at boil.

Dry Cans. 150 lbs. steam per hour per can.

Slashers. 5 ft. and 7 ft. cans, 1500 lbs. per hour for both cans.

Sanforizers. 800 to 1000 lbs. per hour per unit.

Callenders. 90 to 100 lbs. per hour per roll.

Building heating. 15,000 to 18,000 Cubic feet of space per 1000 lbs. steam per hour (Piedmont Section).

Hosiery Dryers. 5 lbs. per form per hour.

Engines. Approximately 100 H. P. non-condensing 3-5 lbs. back pressure, 30 to 40 lbs. per H. P. per hour.

Turbines. 500 to 750 K. W. Capacity Condensing 20 lbs. per K. W. per hour.

Turbines. 750 to 1000 K. W. capacity, 20 lbs. back pressure, 45 to 50 lbs. per K. W. per hour.

Domestic or Process Hot Water. 90 to 100 lbs. per 100 gallons heated per hour through usual temperature range.

Just a word of caution as to the use of the above figures. Circumstances alter cases, and this data is offered merely as a rough guide to equipment loads, and represents a fair average for the types and kinds of equipment listed. Many engineers will no doubt quarrel with the writer, stating specific instances where the figures given do not hold, which is no doubt true; nevertheless errors in one instance will be offset by conditions in another. No attempt has been made to give data for all the steam processing equipment in use.

From this data an approximation of steam demand may be computed.

As to firing methods the steam user is offered three major types. First and perhaps the more common in smaller plants is hand firing. This method finds favor with many users, for the very simple reason that it involves a minimum of equipment and consequently a minimum installation cost, but it is without question the most expensive method of producing steam. Its major objection is that it depends almost entirely upon the "human element" for results, while the quality of coal effects to some extent the amount of steam produced per pound of fuel, the largest variable is in the method of handling the fire used by the fireman.

Skilled firemen can no doubt produce a reasonable amount of steam under either a fire tube or water tube boiler, per pound of fuel fired by hand firing methods; but skilled firemen are scarce. Handling the fire under a power boiler is an art, frequence of coaling, thickness of fuel bed, avoidance of holes in the fuel bed, breaking up the fire and avoiding those two, too prevalent firing faults,

(*Continued on Page 12*)

First Session of A. S. T. M. Spun Rayon Group March 9th

The first meeting of the new sub-committee on spun rayon of Committee D-13 of the American Society for Testing Materials will be held in Washington during the session of the general committee from March 9th to 11th at the Raleigh Hotel, Washington, D. C.

Kenneth B. Cook, of Manville-Jenckes Corporation, has been named chairman of Section III on rayon staple fiber and spun rayon yarns of the rayon sub-committee by Prof. H. J. Ball, chairman of the textile committee of the A. S. T. M., it was made known by A. M. Tenney, chairman of sub-committee A-2 on rayon. The new section of the rayon sub-committee was formed at the last meeting of Committee D-13.

The rayon sub-committee is now made up as follows:

Sub-committee A-2 on rayon, Chairman A. M. Tenney—Section I: Rayon filament yarns, chairman, A. M. Tenney. Section II: Rayon fabrics, chairman, A. Sommaripa. Section III: Rayon staple and spun rayon yarns, chairman, K. B. Cook.

The rayon staple and spun rayon yarn section will hold a meeting in Washington during the session of Committee D-13, March 9th to 11th, at the Raleigh Hotel. It is expected that this sub-committee will follow the procedure of other committees in handling the new work on staple and spun rayon yarns. This includes:

1. The development of suitable analytical procedures, sampling techniques and methods of test for determining the structure and properties of the various rayon staples and spun rayon yarns.
2. The formulation of definitions and nomenclature.

First consideration will be given to test methods and tolerances, leaving for later consideration the formulation of specifications defining the quality of the various staples and yarns made therefrom.

The consideration of synthetic staple by this particular sub-committee is by definition limited to that covered by the term rayon, which includes only those fibers of "cellulose" or "compounds of cellulose." In this category are found at present viscose rayon staple, cuprammonium rayon staple and acetate rayon staple.

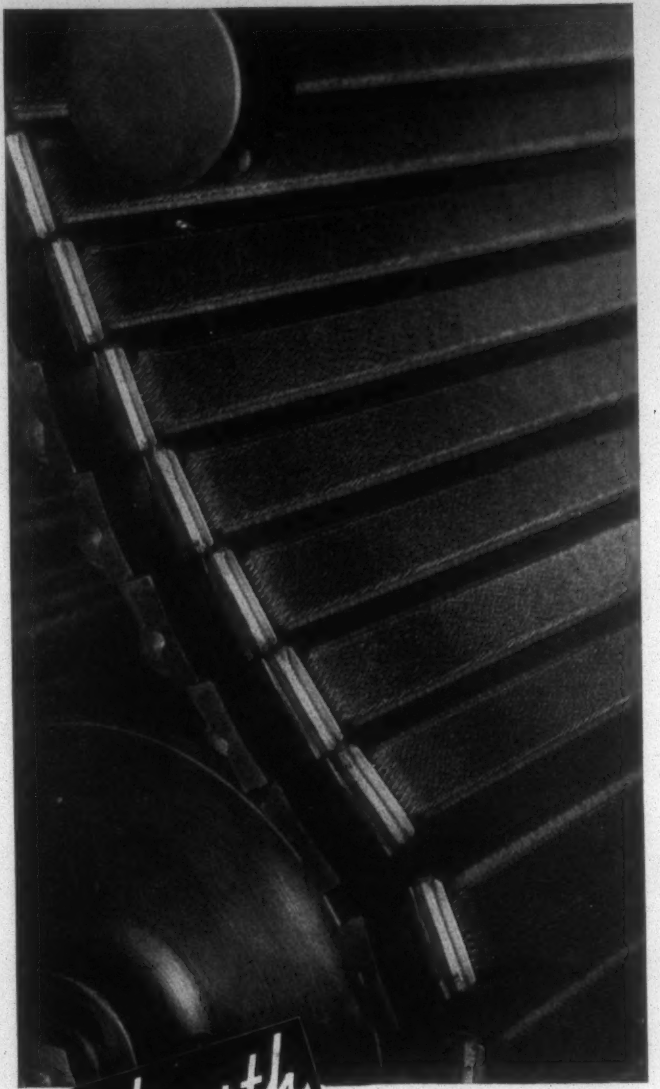
Excluded from consideration are the new type synthetic staples recently introduced to the public which have their chemical origin in protein materials. It may be necessary later to broaden the scope of the sub-committee to include these new developments, and this matter is expected to be discussed in Washington.

It is expected that there will be interest shown in studying the various lusters of staple, including bright, semi-dull and dull. Discussion of the methods of testing for luster will be considered.

Work for the sub-committee on spun rayon yarns is expected to include discussions of proper numbering system, and it has been suggested that as spun rayon yarns are a very recent development that it may be practical to employ the Typp System, which is favored by many members of Committee D-13. This system, when and if adopted for use for all textile yarns, would provide a means of direct comparison of all yarns, whether made on the cotton, silk or worsted and woolen systems.

Tolerances in yarn sizes and tolerances for twist are

(*Continued on Page 11*)



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Receivers Named For Hickory Weavers, Inc.

Hickory, N. C.—Dr. George E. Bisanar, local jeweler and optometrist, has been appointed joint receiver with the First Security Trust Company of Hickory for the Hickory Weavers, Inc., local textile manufacturing concern.

The receivers were appointed by Judge Wilson Warlick in Superior Court at Newton as the result of a suit filed by the First National Bank of Hickory and Mr. and Mrs. J. L. Snyder of Charlotte, principal creditors. An order was entered directing the receivers to liquidate the business for the purpose of paying as many of the debts and mortgages as possible.

A statement of assets and liabilities has not been made public pending completion of an audit now in progress, said H. G. Stephens, attorney for First Security Trust Company.

Norman Bisanar, son of Dr. Bisanar, has been manager of the company, which manufactured tapestries and drapery materials in a plant situated on the outskirts of Hickory. The Bisanars and the Snyders were principal stockholders in the Hickory Weavers, which was organized here in 1930.

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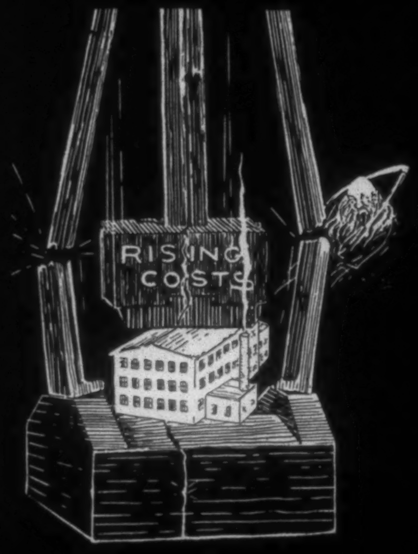

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Personal News

J. B. Crowder has been promoted to overseer carding, Unity Cotton Mills, LaGrange, Ga.

L. B. Hunt, formerly superintendent Clover Mills, Clover, S. C., has accepted a similar position with Manchester Yarn Mills No. 1 Plant, Manchester, N. H.

G. S. Waller has been transferred from overseer twisting to overseer warehouse, Unity Cotton Mills, LaGrange, Ga.

E. L. Stroud has been transferred from overseer cloth room to overseer weaving, Unity Cotton Mills, LaGrange, Ga.

Clyde Winfrey has been promoted from second hand to overseer cloth room, Avondale Mills, Birmingham, Ala.

A. J. Todd has been transferred from overseer carding to overseer cloth room, Unity Cotton Mills, LaGrange, Ga.

W. A. Kennedy, of Charlotte, president of the W. A. Kennedy Company, and WAK, Inc., is a patient at Mercy Hospital, where he underwent an operation for appendicitis last week. Mr. Kennedy's condition was reported as satisfactory as this issue went to press.

John G. Webb, of Hillsboro, N. C., has been appointed Southern representative for Atwood, Crawford & Co., of Pawtucket, R. I., manufacturers of Adjusto-O-Matic Swifts and other textile mill equipment and supplies. Mr. Webb will continue to represent L. M. Hartson Company, of North Windham, Conn. This company makes skewers, underclearer rolls, silk bobbins, etc.

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Edwin Camp, of Cartersville, is now assistant overseer weaving and twisting, Unity Cotton Mills, LaGrange, Ga.

OBITUARY

J. S. CROMER

Tryon, N. C.—J. S. Cromer, 64, died a few days ago and was buried with Masonic honors at Tryon, where he had been living of late years after having lived more than 30 years in Spartanburg, S. C.

Surviving are his wife, Mrs. Ruth Farr Cromer; three sons, David, Edwin and Ben Cromer; and two daughters, Misses Evelyn and Lillian Cromer.

Mr. Cromer was born in Newberry, S. C. He was connected with the textile industry for a number of years, owning and operating the Cromer Supply Company of Spartanburg. Later he became affiliated with the Andrews Loom Company and the Drake Corporation of Norfolk, Va.

R. N. WOOTEN

Belmont, N. C.—Richard N. Wooten, 72, retired pioneer textile worker of Belmont, died February 26th at his home after four months' serious illness.

Mr. Wooten, born in Alexander County, came to Gaston County when a boy and worked at old Pinhook Mill in Mount Holly and then at Gaither's Factory in the South Point section. He began work at the Chronicle Mill when it was built more than 40 years ago and served there and in the Imperial Mill as card room overseer until his retirement about six years ago.

Brief Is Filed By Yarn Group

The Southern Combed Yarn Spinners' Association, representing 1,532,650 spindles manufacturing fine combed cotton yarns for sale, met in Gastonia, N. C., recently and filed a strong brief with the Committee for Reciprocity Information in Washington in relation to the prospective trade agreement with the Government of the United Kingdom, and with that government on behalf of Newfoundland and the British Colonial Empire.

The brief was filed by the president of the Association, R. D. Hall, and the Committee on Reciprocal Trade Treaties composed of A. M. Dixon, chairman, A. G. Myers, A. K. Winget, J. C. Roberts, T. H. McKinney, Fred L. Smyre, Carl A. Rudisill, George B. Cramer, and Emery B. Denny.

The brief explained that the spinners feel that, in consideration of a trade agreement with these countries, it is felt essential to consider certain well known facts in connection with the combed yarn spinning branch of the textile industry. Domestic mills manufacturing combed yarn goods are adequately able to supply the demand for fine cotton yarns and that they have been unable to operate on a full time basis of 80 hours a week for any substantial period for many years and that today the average is approximately 24 hours work an operative for each week.

Any competition from other sources, based upon prices, which will be lowered proportionately to the decrease in tariff rates, will lower productivity of the combed yarn mills and will, in turn, mean lower payrolls and lower individual incomes in direct ratio, thereby prolonging the present business recession to an indeterminate degree, it was declared.

Any lowering of the tariff would reflect unfavorably in employment in the industry and in the industry's purchases from the farmer who grows long staple cotton, it was declared.

How Big Are Corporation Profits?

Corporations are supposed by some people to make large and even evorbitant profits.

But Treasury Department figures indicate that the return on the net worth of all the 500,000 corporations reporting for tax purposes averaged only 2.07 per cent annually from 1925 through 1935. Even in the prosperous years 1928-1929, the average return was less than 6 per cent. For the depression period 1930-1935 the corporate system as a whole lost 8 billion more than it made. In the best year of the 1930-1935 period the average rate of earnings was below 1 per cent.

Leading corporations in certain industries may be able in good years to do very well, but such good fortune merely offsets the unfavorable years that companies in any industry inevitably encounter. For every dollar of profit that was made by one corporation in the period 1925-1935, some other corporation lost 58 cents.

But how big are the profits of conspicuously successful corporations? In a recent study by the Twentieth Century Fund, figures are given on 40 industrial companies considered outstanding with respect to size and profits for the period 1919-1934.

In no year of that sixteen-year period did the average earnings of these 40 companies exceed 12.4 per cent on total capitalization. The average annual profit for the entire period was only 8½ per cent, and in one year the average was 1.4 per cent. From this same study it also appeared that the size of a corporation was no index to earning capacity, and that the best earnings were obtained in fields of active competition.

The return on capital should not be judged by the profits of exceptional companies in especially good years, but by the average results for all corporations over a period of years.

First Session of A. S. T. M. Spun Rayon Group March 9th

(Continued from Page 7)

advocated.

Consideration of test methods for strength will also have the sub-committee's attention. It is advocated that in connection with the Typp System the strength determination be recorded on a unit basis. This method of recording strength would be in line with the unit system as adopted for filament yarns (grams per denier), and would make possible a simple method of directly noting the comparative unit strength between yarns of whatever sizes tested. The test methods proposed are expected to follow very closely the practice of that already in effect in the various tentative standards for cotton and rayon yarns.

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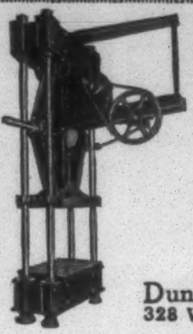

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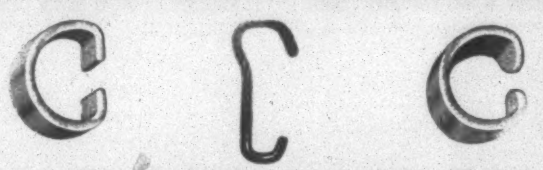

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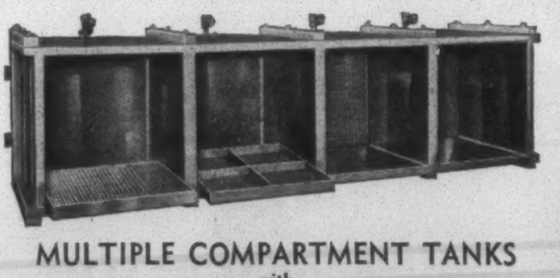

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Textile Plant Boiler Rooms

(*Continued from Page 6*)

over firing and under firing. This is particularly true where the steam demand is unsteady, where there are wide variations in the amount of steam required, from hour to hour and, even from minute to minute. Process changes in the plant produce wide variations in load and unless the fireman is everlastingly "on his toes" they result in wide variations in operating pressures and, these in turn re-act upon the processes for which the steam is being used. It is impossible for the cleverest fireman living to anticipate load changes as fast as they occur in some plants, but a few simple regulations will aid the hand fireman if faithfully carried out.

Hand firing is hard work and the fireman should be provided with proper tools, a good scoop shovel, slice bar, hoe and rake; the boiler room floor should be smooth to faciliate coal handling and to prevent accidents. This statement may appear a needless one; but the writer has handled a scoop and slice bar while standing on a floor that was so uneven and full of holes that extreme care had to be exercised to prevent a turned ankle or a bad burn.

Then too the fireman should fire the boiler and do nothing else, efficient hand firing requires an operation, coaling, slicing or raking, at intervals, of from five to eight minutes and the fireman should not be called on to perform other duties than those immediately connected with his job, for as before stated, hand firing is hard work and the efficient production of steam in the quantities and at the pressures required by any plant using steam for process, will consume the entire time of any man no matter how skilled he may become at his work.

Generally then, let us say that these few simple rules will if carefully and intelligently followed produce steam by hand firing methods with reasonable efficiency.

1. Fire frequently and in small unit quantities.
2. Keep the fire bed even with green coal at front.
3. Avoid holes in the fuel bed.
4. Slice and rake the fire as required to keep the mass incandescent at the back of grates.
5. Allow sufficient time between coalings to distil off the volatile gasses.
6. Watch your water line, particularly with fluctuating loads.
7. Keep ash pits clean.
8. Don't open coaling doors except when required for firing operations and don't leave the fire without attention for longer than eight minutes at a time.

These few rules are very good in their scope, but like most of us, firemen get careless and few of them recognize the importance of these simple facts and how they effect the dollars and cents factor in producing steam.

Stokers and the pulverized fuel methods of firing are in effect attempts to live up to the regulations formulated above by mechanical means and to reduce the human element to the point where it simply becomes one of supplying sufficient fuel.

For by these methods are the quantity of fuel, the quantity of air for combustion as well as the rates at which each is supplied are at least semi-automatic and in the most modern plants are completely so. For this

(*Continued on Page 22*)

Avondale Mills Among 1937 Winners Of Advertising Awards

The advertising campaign of the Avondale Mills of Alabama in the *Daily News Record*, New York, received one of the Annual Advertising Awards for 1937 at a dinner of 200 advertising and publishing executives held at the Waldorf-Astoria Hotel recently under the auspices of *Advertising & Selling* magazine.

The awards were instituted in 1924 by Edward Bok and have been continued during the last three years by *Advertising & Selling*.

The Avondale Mills of Alabama campaign dealt with the human side of industry, and received one of two honorable mentions given for "advertising as a social force."

Italians Will Grow Cotton in Abyssinia

Cotton culture is becoming the outstanding feature of the Italian efforts to develop Abyssinia, according to the *Manchester Guardian Commercial*. Some months ago the Compagnia del Cotone d'Etiopia was founded, with Signor Olivetti, the president of the Italian Cotton Institute, as its chairman, and more recently the Ente del Cotone per l'Africa Orientale, with Prince Boncompagni for chairman. The capital of the latter corporation is to be 25,000,000 lire, half of which is said to be subscribed by the Italian Cotton Institute. Italian East Africa is to be divided into separate cotton districts; four of these are already delimited—Tessenei, where cotton has been cultivated for some time past, Ausac, Metemma and Cobbo. A fifth district may be created along the Juba River.

Efforts are being made to interest the principal companies in intensive activity in these regions. The Compagnia del Cotone has already begun preparatory work for the development of cotton cultivation and has concessions in three districts. The building and equipment of storehouses, ginning factories, compressing plant ,and so on, will naturally take come considerable time; oil presses and refineries, soap factories, etc., are also to be set up for the complete exploitation of the cotton culture. Cotton planters will work under concessions, and will be required to deliver their crop to the companies in their district for storage to enable the cotton culture of the whole region to be supervised closely.

It's Springtime—and the Fish Are Hungry in FLORIDA!

Shuck your cares, man. Grab your old hat, golf clubs, fishin' rod and wife. Bring them to Florida for this sunny season of fun and new hopes.

But first, give us a ring or drop us a note. We have the information to help you enjoy the *best* in springtime vacations *with valuable savings on expenses*. Sounds contradictory, but it actually is not.

Two of the world's greatest resort hotels have a vacation plan that's a world-beater. The hotels: RONEY PLAZA, America's finest oceanfront hotel, in Miami Beach, and the MIAMI BILTMORE, center of springtime social and sports activities, in Goral Gables (Miami). The plan: luxurious living PLUS a complete vacation for the one cost of your hotel accommodations!

As a guest of either hotel, you have the magic "Open Sesame" to all the recreational fun—fishing in the teeming waters around the Florida keys, surf bathing on a beautiful private beach, golf on a championship course, as well as the manifold diversions on the hotel estates themselves. Guestship at the Roney or the Biltmore makes available to you full membership privileges in three of America's greatest sports clubs (after you have been approved by the membership committees), *without payment of initiation fees or dues*. Think what these privileges would cost you elsewhere.

Another point in this revolutionary guest policy: free transportation by aerocar (big auto lounge cars) to all activities beyond the hotels' grounds—an economy that cuts down your normal vacation expenses at least one-third!

But let us talk personally to you about these and many other valuable points in this amazing plan to give you the best in resort living and still cut the costs!

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TEXTILE BULLETIN

Member of
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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Begin Twenty-Eighth Year

WITH this issue the TEXTILE BULLETIN begins its 28th year, the first issue having been issued on March 2nd, 1911.

In 1911 the South had 11,000,000 spindles with 16,500,000 in New England.

Since that time we have seen the spindles of New England increase to almost 21,000,000 and then begin a decline which has brought them to the point that the latest statistics show only 5,429,000 in operation.

We have seen Southern spindles increase steadily from 11,000,000 to 19,500,000 and we have seen the increased spindles and looms furnish employment to thousands who formerly eked out a distressful existence upon tenant farms and in mountain coves.

In 1911 there was optimism throughout the South, as is evidenced by the fact that 803,000 spindles were added during 1912, but today the hand of an unfriendly Government presses so hard that there is pessimism and none have the temerity to consider erecting new cotton mills and few to enlarge or expand existing plants.

The total indebtedness of the United States when we began publication and at the present was:

1911	$ 1,153,985,000
1938	37,500,000,000

The entire debt in 1911 was less than the deficit for 1937.

Earnings which in 1911 could be used for expansions and thereby furnish employment to workers, must now go to pay the gigantic costs of Government including interest upon an ever-increasing indebtedness.

As we begin our 28th year a fog of uncertainty surrounds us, but we still have faith in the American people and their ability to meet a crisis which is inevitable.

The Proposed Treaty With England

ONE of the most important trade agreements that the United States has considered is now in the process of negotiations.

The Treaty of the United States with the United Kingdom practically sets the pattern of world trade in regard to raw cotton and cotton products. It is so involved in its principles and schedules and so extensive in its trade area that the State Department can not be too careful, or too wise in its considerations.

The list of cotton articles prepared by the State Department includes the whole range of cotton manufactures from yarns and shoe laces to the widest types of cotton fabrics; also, it embraces the finishing branch of the industry. Almost the entire cotton cloth and yarn tariff schedule is therefore under consideration by this committee. All told, sixteen hundred establishments, employing 433,546 wage earners in 1935, are deeply concerned in the outcome.

The cotton textile industry is one of the nation's major industries, ranking with steel and the automobile. There are vast numbers of persons who depend upon cotton for a livelihood—farmers, cotton merchants, cotton shippers, cotton garment workers, cotton machinery manufacturers and all those engaged in the domestic transportation and distribution of raw cotton and its products.

It has been estimated that twelve million are directly effected by this treaty and perhaps many million more are effected indirectly.

The cotton textile industry is a scattered community of small mills for the most part. Of the 950 cotton mills that operate spinning spindles more than 70% are comparatively small units having 20,000 spindles or less and employing on an average approximately 200 persons.

In this group about 40% have 10,000 spindles or less. About 22% of the industry may be classed as medium sized units having more than 20,000 spindles but less than 80,000 spindles; the remaining 8% have 80,000 or more spinning spindles.

There are approximately 300 weaving mills, including narrow fabrics mills, that have only looms and no spindles. Practically all of these are small enterprises.

Relatively speaking, there are no large units in this industry of the size of those in steel, oil and automobile industries.

This trade agreement, insofar as textiles are concerned, will vitally effect a great group of scattered, struggling industries of great diversification of products and large groups of employees. It will effect the life of practically every one in the South and many in other areas of this nation.

This nation has lost most of its export trade and has suffered a lot from imports of cotton textiles.

The United Kingdom is today the largest exporter of cotton goods, in terms of value, in the world. It sold ten times as much yarn and piece goods abroad as did the United States in 1936, and was exceeded only by Japan as the leading exporter of cotton piece goods to the United States.

The United States has the highest wage scale in the world, the highest living cost and no country on an average has shorter working hours. The textile industry participates in all of these conditions and can not do otherwise. It must be protected from foreign exports since it is in this condition because of the national economic policies placed upon it.

Even under present tariff policies, cotton manufactures seem less well protected than the products of numerous other industries.

The ten-year record of our foreign trade in cotton piece goods shows that exports have shrunk and imports have increased. The Committee on Reciprocity should surely study this situation carefully and if at all possible, this condition should be reversed. The present condition of the industry should impress upon those who are negotiating the seriousness with which the textile industry views the situation.

The cotton textile industry is one of peaks and valleys which when leveled out to averages, shows little average prosperity.

The domestic market for cotton textiles should be preserved for the domestic mills. Reductions or changes in rates of duties must not increase the volume of imports so that this will further increase unemployment. They must not force employers to pay lower wages or require longer hours to meet the new foreign competition.

The condition of the entire economic field must be viewed carefully in order to ascertain whether conditions are normal or abnormal and in which direction the industry must move to acquire normality.

If this is done, we earnestly believe that there will be no lowering of the present tariff schedules, but raises may be in order and other products protected by new schedules.

The Buying Power of Wages

It matters little how much gold or silver or how many paper dollars a man receives for his labor.

It matters much how much he can buy with that which he receives.

A recently-made survey revealed that on the basis of prevailing wage standards a market basket of groceries for which an American workman labors 1½ hours, the Englishman must work 3¾ hours, the German 7 hours, and the Belgian 14 hours.

Upon the above basis the workers of England must be on the job 20 hours and the German must work 37 hours in order to have as much food and clothing as the American workman who works for 8 hours.

If we could send some of our workers to Europe for a few months we would hear fewer complaints.

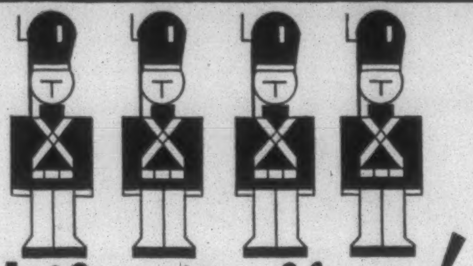
Anyhow, it is seldom the workers who do the complaining. It is usually some politician or Government employee with a theoretical knowledge or a labor organizer seeking to place workers upon a dues paying basis.

Montgomery's Statement

The following statement was issued by W. S. Montgomery, president of the Spartan Mill, following the close of a National Labor Relations Board hearing which extended over a period of seven weeks:

> The only comment I care to make at the moment is that it is a source of real gratification to me that of the more than 850 employees of Spartan Mills, only one appeared during the entire seven weeks' hearing to testify against the company. And that one is the wife of a complainant.
>
> As a matter of fact, all of the board's witnesses on the issue of discrimination were either T. W. O. C. or C. I. O. organizers, complainants, or close relatives of complainants. On the other hand, scores of employees, among them some ardent union members who not only voted for the strike but picketed throughout the trouble, appeared voluntarily to refute the charge that the management had discriminated against them or anyone else.

The truth is that very few of the employees of the Spartan Mills affiliated with the C. I. O. and that men were brought from Gaffney, S. C., and other points for the purpose of creating disorders and forcing the Spartan Mills to close.



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Mill News Items

HOGANSVILLE, GA.—U. S. Rubber Products, Inc., have awarded general contract to Batson-Cook Company, West Point, Ga., for a one-story mill addition to be used as a warehouse.

MONROEVILLE, ALA.—Vanity Fair Silk Mills have awarded a contract to Agee & Kimbrough, Pine Hill, Ala., for a one-story addition to the plant, it is reported. This addition will cost in excess of $25,000, including equipment.

GRAHAM, N. C.—Royal Dye Works, Inc., of Graham, has been issued a charter to be textile dyers under $50,000 authorized capital, with $300 subscribed by E. L. Bost, of Graham, and W. B. Sanders and E. L. Curlee, of Burlington.

GREENVILLE, S. C.—The Southern Weaving Company, with the Gallivan Construction Company in charge of work, has recently completed a new office building at an approximate cost of $10,000.

GORDONSVILLE, GA.—S. M. Nottingham and John Graves are reported at the head of a project to establish a local rayon fabric mill. A company is being formed and a fund of $30,000 will be raised to construct a one-story building, to be 130x130 feet, and the mill is expected to employ about 10 persons.

MARSHALL, N. C.—Marshall Mill & Power Co., recently organized, has begun operation of a new cotton mill in the plant formerly occupied by the Capitola Manufacturing Company. Extensions and improvements have been made in connection with a modernization program costing close to $75,000, it is reported.

GREENSBORO, N. C.—The North Carolina Department of Labor has awarded Proximity, White Oak and Revolution Mills and Proximity Print Works "Grade A" certificates.

These mills have been periodically inspected by the Department of Labor and after each inspection the mills have been notified that they have measured up to the highest rating.

VERONA, VA.—A hosiery mill 130x167 feet is under construction at Verona, Va., four miles from Staunton, for the Oscar Nebel Company, which also has a plant in Winchester and another half a mile west of Staunton.

When the new unit is ready, the company will move its headquarters from Hatboro, Pa., to Staunton.

The company, which employed 400 in Pennsylvania and operated 54 full-fashioned machines, was incorporated in 1925 with a capital of $1,283,223. It has been moving down gradually. Recently it appointed the Arthur Hafela Company in New York its sole selling agent.

Mill News Items

Daisy, Tenn.—Kingsboro Silk Mills, Inc., of Daisy, recently began the installation of new dyeing and finishing machinery. Formerly this mill did only weaving.

Etowah, Tenn.—Work is being pushed forward rapidly here on the new building which will house the new Sports Wear Hosiery Company of Philadelphia, Pa., local unit, in an effort to have the building completed by the first of March. The machinery will be installed immediately upon the completion of the mill building. The new industry will furnish employment to approximately 150 operatives.

Griffin, Ga.—The Griffin Knitting Mills is scheduled to be put back into operations with between 125 and 150 workers on the payroll. These mills were bought a short time ago by H. M. Collier, of Montezuma, Ga., from J. A. Evans, of this city. Mr. Collier has been secretary and superintendent of the Montezuma Knitting Mills, Inc., which company manufactures boys' and misses' knit union suits. The company here was engaged in the manufacture of men's and boys' ribbed underwear, children's waist suits, fleeced sweat shirts and coats, using 40 circular knitting machines before being bought by Mr. Collier. No announcement has been made as to the products to be manufactured here under the new ownership.

Birmingham, Ala.—Alabama Mills, Inc., reports net earnings for the year to December 31, 1937, after depreciation, bond interest and income taxes, of $226,576 on net sales of $6,669,169. This compares with a net income of $365,671 on net sales of $5,225,306 in the previous fiscal year.

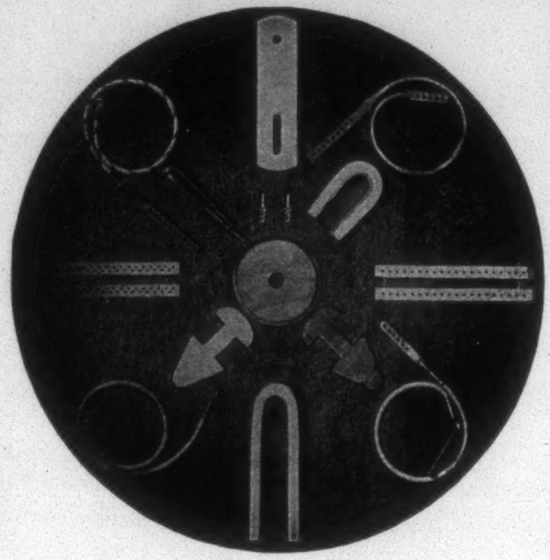
On December 31st last, current assets were $1,770,044 and current liabilities were $863,557. At the close of the preceding fiscal period current assets were $1,970,615 and current liabilities $780,043.

Inventories as at December 31st amounted to $1,329,476 and cash was $113,874. On December 31, 1936, inventories totaled $1,172,703 and cash was $56,130.

Burlington, N. C.—The Graham Full-Fashioned Mill, Inc., a new firm at Graham, will be open for operations soon, according to announcement of officials. The plant is located in the building formerly occupied by Scott & Baker Knitting Mill.

Tom Neal, J. Z. Erwin and George and Clay Holt, all of this county, are owners of the mill, which will manufacture three-thread women's crepe stockings, and employ about 35 people. The owners think it will take about eight weeks for the plant to make full production. Four full-fashioned machines are being installed, and more will be added later, if the venture proves successful. Mr. Erwin has had about 15 years' experience in hosiery, and Mr. Neal seven. Both were formerly with Wilson Hosiery Mill, Burlington, and the Holts were in the Scott Mill. The plant occupies 60 by 70 feet on the first floor, and Thompson Hosiery Mill operates on the floor above.

Rice Dobby Chain Co.



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Houghton, E. F. & Co.	—
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Johnson, Chas. B.	—
—K—	
Keever Starch Co.	—
—L—	
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—M—	
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—P—	
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Rhoads, J. E. & Sons	—
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U. S. Gutta Percha Paint Co.	—
U. S. Ring Traveler Co.	—
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Wolf, Jacques & Co.	—
Wytheville Woolen Mills	—

New Book On Spinning

"An Introduction to the Study of Spinning," by W. E. Morton, M.Sc. Tech., F.T.I., Professor of Textile Technology in the University of Manchester, and head of the Textile Department, Manchester College of Technology, is a new book published by Longmans, Green & Co., London, New York and Toronto. The price is $4.50.

Mr. Morton has written a very interesting work with the aim of showing the student in the very beginning the fundamental nature of the processes through which the raw materials have to go in the course of yarn manufacture; to show how the evolution of the various modern machines from the original handicraft appliances has been influenced in each case by the character of the raw material it was intended to treat; and to exclude as far as possible all reference to confusing mechanical complications until there is no longer any risk of their crowding out of the picture the things that really matter.

All of the more important fibers are treated with, and handled in both a historical and scientific manner. Illustrations show the physical characteristics of the different fibers and the methods of handling them.

All in all, it is a very interesting and informative book, and is not as elemental as the title might suggest. Any spinner or carder of varied fibers would find it useful.

Sanforizing Gains in 1937

Yardage of goods Sanforized increased from 358,000,000 in 1936 to 450,000,000 in 1937, according to an announcement made recently by Cluett, Peabody & Co. Licenses have been granted to 89 companies in 10 countries. In the United States 63 mills are using the Sanforizing process and 123 machines have been installed.

Hercules Declares Dividend

Wilmington, Del.—The Board of Directors of Hercules Powder Company recently declared a dividend of 40 cents a share on the common stock of the company.

This is payable March 25th to stockholders of record at the close of business on March 14th.

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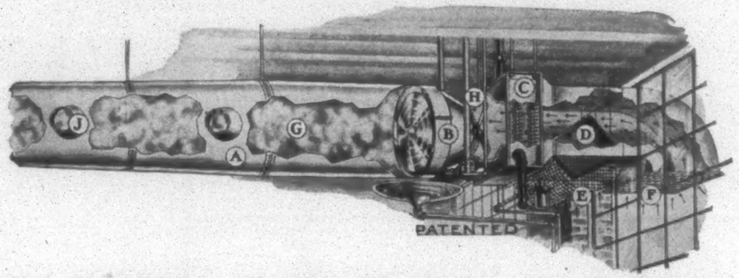

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Flexrock Puts Major Branch in Atlanta

A new Flexrock branch with carload warehouse stock has been placed in Atlanta. This branch address is 384 Peachtree Arcade Building, Atlanta, Ga. The warehouse stock is carried by the Monroe Bonded Warehouse Company.

C. G. Miller, general manager of the Flexrock Company at Philadelphia, made a formal announcement that J. F. Prince will be in charge of this entire branch. Mr. Prince will hold the title of Southern sales manager. He is a native of Georgia and has spent quite a number of years in the building maintenance industry. He will be able to help many Southern organizations in the selection of proper building maintenance materials for specific problems of annoyance.

While the Flexrock Company maintains branches in Pittsburgh, Cleveland, Detroit, San Francisco, and Chicago as well as foreign branches at Havana, Cuba, Mexico City, Johannesburg, South Africa, Bombay, India; and in other foreign cities, there are only three major branches with total facilities. Atlanta will be one of them. Chicago and San Francisco are the other two at the present time.

Contracts Let Under Healey Act Valued At $8,580,087

Washington, D. C.—During the week from February 18th to February 24th, inclusive, seven Government agencies reported 158 contracts valued at $8,580,087 (of this amount $5,368,844 were for contracts of indefinite amounts based on last year's purchases and which purchases are to be made if, when, and where needed) as compared with the previous week when 12 Government agencies reported 81 contracts valued at $4,478,205. Only those contracts subject to the provisions of the Walsh-Healey Public Contracts Act are included here.

Among those receiving textile and apparel awards were the following: S. B. Marks Co., New York City, pillow cases, $29,113; Lane Cotton Mills Co., New Orleans, sheeting and suiting, $10,306; Batavia Mills, Inc., New York City, unbleached muslin, $20,740; Batavia Mills, Inc., New York City, plisse crepe, $18,970; Batavia Mills, Inc., New York City, flannel, $40,622; Cupples Co., manufacturers, Brooklyn, Manila rope, $12,992; Ulmer & Wagner Mfg. Co., Bound Brook, N. J., jumpers, $192,327; Belvidere Garment Mfg. Co., Chicago, jumpers, $39,900; and Universal Overall Co., Chicago, jumpers, $50,925.

General Dyestuff Circular

General Dyestuff Corporation releases a circular on Diazo Brilliant Orange GGA Extra Conc. which, when diazotized and developed with Developer A, produces on cotton or on rayon bright shades of a yellowish orange; the color is particularly recommended on acconnt of its very good fastness to washing and its excellent dischargeability. It is said to be of value for self shades as well as for brown combinations which must be dischargeable.

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BULLETIN
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Cotton Goods Markets

New York.—Sales of cotton gray goods last week were in excess of production and prices were noticeably stronger.

Mills sold sizable quantities of print cloths and sheetings for spot and nearby delivery and prices showed advances of ⅛ of a cent a yard on the week. Converters, mail order houses and bag manufacturers were principal buyers. Sales of combed cotton goods were steady and buyers continued to pay premiums for spot deliveries on a few items, notably slub yarn broadcloths.

A more stable price situation in several quarters of the market has been one of the causes for the slightly better movement of merchandise. Merchants who have been waiting for the general price structure of the dry goods market to level off, although still hesitant about placing commitments too far ahead, are beginning to make inquiries for merchandise. Too, in some sections of the market there have been some advances effected. Although these increases have not stimulated business and and in some instances have met with resistance, several capable merchants feel that the immediate future trend will be upward rather than downward. Several buyers of finished goods have been delaying purchases because of the late Easter. There is also danger in this course, according to sellers, who claim that finished goods inventories are not at a point where the trade can be certain of immediate delivery later in the spot market season.

Finished cotton goods were spotty. Percales continued in moderate volume at unchanged prices. Denims were raised ½ cent a yard. Demand for tickings improved. Sales of sheets, pillow cases and towels were somewhat better. Demand for combed wash goods was confined to scattered small lots.

Several larger rayon yarns producers stepped up production as turnover increased. Prices were strong. Demand for rayon woven goods was irregular.

Print cloths, 27-in., 64x60s	3¾
Print cloths, 28-in., 64x60s	3⅞
Gray goods, 38½-in., 64x60s	4¾
Gray goods, 39-in., 80x80s	6⅝
Tickings, 8-ounce	15½
Denims, 28-in.	10½
Brown sheetings, standard	9¼
Brown sheetings, 4-yard, 56x60s	5½
Brown sheetings, 3-yard	6⅜
Staple ginghams	10

J. P. STEVENS & CO. Inc.

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Cotton Yarn Markets

Philadelphia, Pa.—The recent advance in cotton, if maintained, is almost sure to result in a general rise in yarn prices, and this statement is substantiated by the increasing number of spinners who are at the present time asking more for standard white yarns. Buying is still conservative, and mostly for short or nearby delivery, but it is noted that a considerable portion of these sales are to buyers who did not indulge in the speculative buying of this time last year and as a consequence did not have many 1937 losses to write off, and are in a comfortably strong position at this time.

Toward the end of the week it was felt that the cotton yarn market in general was in an improved position, and commitments were in many cases from 10,000 to 25,000 pounds. There is still some confusion on the part of the buyers, in that they think that yarn is still available in much lower than quoted prices, but spinners assert that they are at the bottom of their prices, and are not anxious to do any great amount of future business even at quoted prices.

Inquiries were better toward the end of the week, especially in combed yarn, and it is the opinion of the market that the position of the combed yarn spinners is fairly good as regards stock on hand. With shipments almost equal to production since the first of the year, it is felt that the inventory situation is not alarming. Most of the stocks estimated to be on hand in the mills is believed to be single yarns, as the bulk of sales has been for plied yarns.

Mercerizers, who are usually good judges of staple cotton trends, have been calling in gray yarn shipments actively during recent weeks. As usual, there is some price cutting among a few of the spinners, but there has been less than at many times in the past, and the more important producers have put through some advances recently, and apparently are planning to make them stick.

Southern Single Skeins

8s	18
10s	18½
12s	19
14s	19½
20s	20½
16s	20½
30s	25½
36s	29
40s	30½

Southern Single Warps

10s	18½
12s	19
14s	19½
16s	20
20s	20½
26s	23½
30s	25½
40s	30

Southern Two-Ply Chain Warps

8s	18½
10s	19
12s	19½
16s	20½
20s	21½
24s	23½
26s	24½
30s	26
36s	29½
40s	30½

Southern Two-Ply Skeins

8s	18½
10s	19
12s	19½
14s	20
16s	20½
20s	21½
26s	24½
30s	26
40s	30½

Two-Ply Plush Grade

12s	20
16s	21½
20s	22
30s	27

Duck Yarns, 3, 4 and 5-Jly

8s	19
10s	19½
12s	20
14s	20½
16s	21
20s	22

Carpet Yarns

Tinged, 5-lb. 8s, 3 and 4-ply	15½
Colored strips, 8s, 3 and 4-ply	17
White carpets, 8s, 3 and 4-ply	17½

Part Waste Insulated Yarns

8s, 1-ply	14
8s, 2, 3 and 4-ply	14½
10s, 2, 3 and 4-ply	16
12s, 2-ply	16½
20s, 2-ply	19½
16s, 2-ply	18½

Southern Frame Cones

8s	17½
10s	18
12s	18½
14s	19
16s	19½
20s	20½
22s	21½
24s	22½
26s	23½
28s	24½

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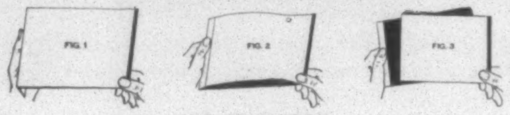

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HYGROSOL—As Penetrant conditioning Cotton Filling

SEYDEL CHEMICAL COMPANY
(House of Service)
JERSEY CITY, N. J.

Greenville, S. C. Edgewood, R. I.
Harold P. Goller Alexander W. Anderson

Textile Plant Boiler Rooms

(*Continued from Page 12*)

reason pulverized fuel and stoker firing are considerably more efficient than the best hand firing obtainable.

Briefly then, these two types may be described as follows: With stokers some mechanical means, a ram or series of rams, driven either by a simple steam piston or a bell crank which is geared to some driving medium, either a motor or a turbine or again a worm which is motor driven, advances the fuel from a hopper into the firebox of the boiler; the hopper may be fed by hand from the adjacent boiler room floor or by gravity from an overhead coal bunker. In either case the object of the ram or worm is to progressively push forward into the fire box of the boiler a predetermined amount of fresh fuel as fast and no faster than the already burning supply is consumed. Here again we have performed by mechanical means the first rule previously set down, namely, "Fire frequently and in small quantities". This is really the basic principal in burning soft coal.

In fact, stokers of whatever type, function normally in strict accordance with the first three rules, as they keep the fuel bed even and of uniform thickness and by virtue of the slow uniform rate of forward motion of the fuel-bed, they tend to maintain such an even thickness of fire that the combustion air coming up either by natural draft from the ash-pit below the fire-bed or by means of a forced draft fan, is much less liable to blow holes in the fuel bed. To be sure the fuel-bed must be sufficiently porous to allow of the combustion air reaching the incandescent coal and supplying it with the oxygen necessary to support combustion.

Stokers too, due to the agitation provided by the progressive forward movement of fuel bed, require less attention by hand, that is breaking up and cleaning of the fire. Then too stokers are all provided with some means of varying the rate of progressive forward movement of the fuel; this is accomplished by increasing or decreasing the speed of the ram or worm. This may be accomplished manually by the attendant fireman, or by mechanical and automatic means, so that variations in boiler load and their accompanying changes in pressure, raise or lower the speed of the coal feed mechanism automatically. A means is also provided for varying the amount of combustion air supplied, so as to maintain the proper fuel air ratio.

These then are the simplier underlying principles of stoker firing. This type has its inherent faults as well as any other mechanism but due to the fact that stokers, as previously noted, provide more readily a bed of fuel to be burned which is uniform in character and can be readily varied to conform to changes in load, much more reliable and efficient results can be obtained with this method of firing than the best hand methods obtainable.

Stoker manufacturers have now designed and offered for general use equipment which will burn any given quantity of fuel efficiently between the limits of sizes offered; in other words, no boiler nor its load is too small nor any too large to be fired by a stoker, only the size of the plant and its load are the limiting factors in stoker selection.

Generally speaking, the best rates of evaporation, that is pounds of steam produced per pound of fuel consumed, with hand firing will be found to average at eight or less, while with stokers and pulverized fuel under normal operating conditions, rates of ten, eleven and twelve will be common. This means then that the latter two methods of firing will produce under given conditions the same amount of steam with from twenty to thirty-three and one third per cent less fuel. This is a general statement and like all general statements is capable of misinterpretation, but the fact remains that stoker fired and pulverized fuel fired boilers will produce steam at a rate so much beyond the best hand firing methods that it pays any plant to supplant hand firing methods. "The proof of the pudding is in the eating thereof", or in other words, stoker and pulverizer manufacturers could not *continue* to make and *sell* their equipment if it were not superior to hand firing.

Now let's give a little thought to pulverized coal as a fuel. Reduced to its simplest terms, this system employs some means of first drying the coal, then pulverizing it by means of hammers, balls, grinding rolls, and even by attrition, that is, coal grinding against coal, or combinations of these methods, to a fineness comparable with baking flour. This is done mechanically in a piece of equipment known as a mill. The fine coal is either driven or drawn through a separator by means of a fan to sort out the coarser particles for regrinding, and then conveyed to burners in the face or corners of the boiler furnace in pipes, a mixture of coal and air. Here the necessary additional air is introduced into the mixture to support and provide combustion and the resultant mixture of coal and air is burned as a gas in the furnace.

Naturally coal can be burned at extremely high rates per hour under these conditions and under nearly perfect combustion conditions, provided, of course, that the equipment used is properly designed and installed, and first of all adapted to this method of firing.

As to size and adaptability, naturally this type of firing is best adapted to the larger sizes of steam producing units, although the writer has designed and installed with success, unit pulverizers delivering powdered coal to the furnace under 250 H. P. horizontal return tubular boilers.

Present methods require, however, special treatment of furnace walls by water cooling, since furnace temperatures of 2700 degrees F. and even higher are quite common, but this simply means that these water walls become part of the steam producing equipment; in fact, in many recent installations, one of which was under the writer's supervision, 65% of the steam generated by the unit was produced by the furnace walls and only 35% by what a few short years ago would have been termed the boiler. Suffice it to say, however, that this type of equipment should only be installed under the design and control of competent engineers. The problems involved are too many, and too varied to be left to the mercies of the average plant personel, no matter how well informed they may be.

Now a word or two about fuel. Varying types of coal are available in this market, each with varying quantities of carbon, volatile matter, ash and heat unit content (B. T. U.s) per pound, but don't be governed too much by per ton costs, since a healthy share of that cost is represented by delivery charges, and the freight on a ton of poor coal is the same as on a ton of good coal, so that in the end, better grades are by far the cheaper, provided, of course, that you have the same means at hand in your plant to take advantage of the extra heat units in the fuel. There's no sense, of course, in buying the better grades of coal and then allowing a healthy share of those heat units to escape up the stack or into the ash pit.

We've concerned ourselves so far with producing the steam that your plant requires by heating water in a boiler with fuel, but there's another element in that steam, and that is the water that is changed into steam by the heat. This is generally classified as feed water, and various factors enter into its handling. Since it is generally available in the boiler room at a somewhat lower pressure than the steam pressure in the boiler, some means must be provided to introduce this feed water into the boiler. The most common method employed is a pump, either steam actuated, reciprocating, or a steam turbine or a motor driven centrifugal pump. These pieces of equipment employ simple mechanical means to overcome the previously mentioned pressure differential and inject water into the boiler as fast as the fuel converts it into steam.

If either the turbine driven centrifugal or reciprocating pumps are used, it is good practice to utilize the exhaust from these units for heating feed water, more of which later.

Condensate, that is the condensed steam from all building heating apparatus and process equipment, such as hosiery dryers, dry cans, slashers, callenders, etc., should be returned to the boiler room for re-use in the boilers for two reasons. First, since it is in effect distilled water, it is relatively pure as compared with any raw water that may be used for make-up; second, it is bound to be at a higher temperature than any make-up water, which in this section, will be at a year round average of from 50 degrees F. to 60 degrees F. For these reasons it is quite worth while to go to some considerable trouble and expense to return this water for re-use, and not spill any of it overboard.

Feed water heating should be given careful consideration, not only from an economical standpoint but from one of safety as well, for it is extremely poor practice to introduce make-up water at from 50 degrees F. to 70 degrees F. into the drum of any power boiler, for while it soon absorbs heat, this introduction is bound to create rapid temperature changes with other boiler structure, and consequently create internal strains in the boiler metal, which even of no apparent immediate effect, will weaken the metal structure eventually beyond the safety point. Aside from this operating safety factor, the economies of feed water heating are well established, for it has become a recognized principle that each eleven degrees rise in feed water temperature effects a saving of 1% in fuel, i. e., a rise in feed water temperature from 60 degrees F. to 192degrees F. will effect a 12% saving in fuel. This too often then is one of the reasons for saving the heat content as previously noted in discussing condensate return.

This heating of feed water or make-up water may be accomplished by either of two recognized methods, by means of a closed heater, usually located between the feed pump and the boiler—this type of equipment is in effect a heat exchanger, where the fresh water is circulated through non-ferrous tubes, contained within a cast-iron or steel shell, to which is admitted exhaust steam from pumps and other steam driven auxilliaries. Heat is abstracted or exchanged from the exhaust steam through the walls of the tubes to the passing make-up water on its way to the boiler. The particular virtue of this method is that there is no possibility of contamination of the feed water through contact with dirty, oily exhaust from the pumps or engines. This system affords no storage however.

The other or open heater method employs a cast-iron box-like container through which the feed water is allowed to travel in small streams and at the same time coming in actual contact with the exhaust steam, thereby absorbing heat from it. An oil separator is generally used in connection with this type of equipment, but since the oil that is present is in a highly emulsified state its removal is not quite possible and an oil filter is generally employed between the heater and the boiler. This open type heater is usually operated at low pressure, i. e., from three to five pounds, so it is usually installed so that the pump or pumps occupy a position between the heater and the boiler. This type of heater has the advantage that through direct contact more heat is absorbed from the exhaust and some small amount of storage is afforded by the body of the heater. More modern equipment of this type is generally equipped with a de-areating feature; in other words, the entrained air is removed from the water, and since air is always present in raw water and as air has a large oxygen content, its removal reduces to an appreciable degree the corrosion of steel boiler tubes, drums and shells as well as all piping in the system.

Feed water treatment occupies a position of importance in today's steam making processes. Raw water contains chemicals which unless removed, or held in suspension in the boiler water, will deposit a skim coating on the boiler metals in the form of scale. This scale formation on the inside of the tubes in water tube boilers, and on the outside in the case of fire tube boilers, acts as a heat insulator and tends to prevent the heat transfer from the hot flue gas to the water. This building up of scale can very readily become so serious as to reduce this heat transfer to the point where the surface in contact with the hot gasses becomes red hot, reducing its inherent strength up to the point of rupture, and the tube bursts or fails.

Two distinct methods of correction are normally employed, sometimes separately but more often in combination. Raw water containing scale forming chemicals is designated as hard water, so is put through a process known as softening, either hot process or cold process softening where the raw water is placed in contact with chemicals or natural compounds which tend to remove the scale forming constituants. The second method of boiler water treatment is to periodically introduce into the boiler water, within the boiler, chemicals or compounds which in effect keep these scale forming properties in suspension, and do not allow them to deposit out or form scale on the heat transfer elements of the boiler.

These treatments conbined with periodic blow-downs of the boiler, while under pressure, will prevent any serious deposits of scale on the heating surface.

Personel, boiler room help, is an ever vexing problem.

(*Continued on Page 26*)

Southern Sources of Supply

For Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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AMERICAN ENKA CORP., 271 Church St., New York City. Sou. Rep., R. J. Mebane, Asheville, N. C.

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Cotton Textile Merchants Protest Trade Agreement

(Continued from Page 4)

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Textile Plant Boiler Rooms

(Continued from Page 22)

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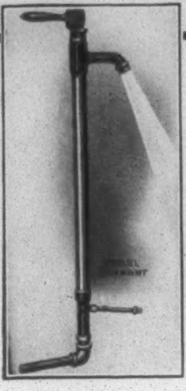

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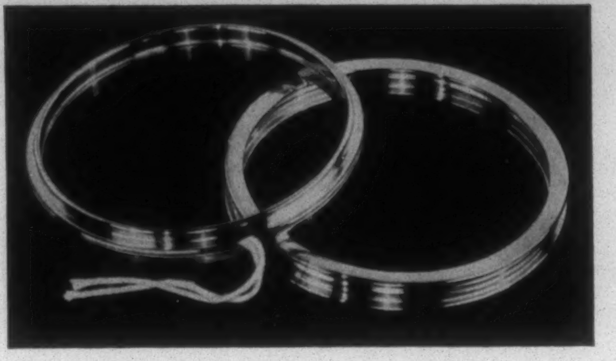

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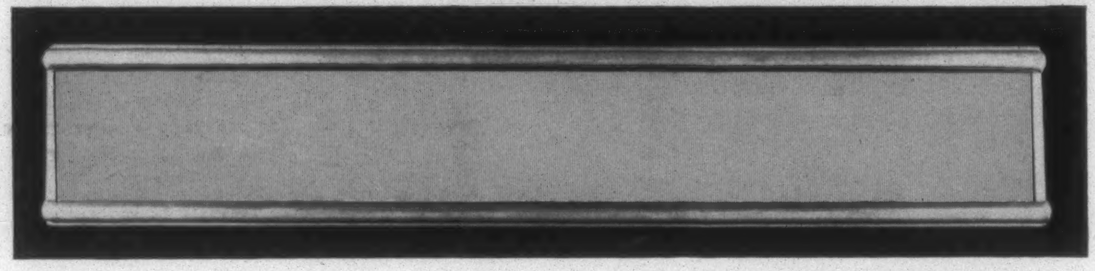

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